

REMARKS

Claims 1-12 have been rejected by the Examiner under 35 U.S.C. 102(b) as being anticipated by Kobayashi et al. This rejection is respectfully traversed.

The present invention is directed to known problems which exist in the art, that is, "loss of image register" and "image distortion," such as for example straight lines appearing as curved lines in a printed image, when using an image process that involves the use of an intermediate transfer belt. As noted on page 2, lines 6-11 of the present application, one of the disadvantages of such known printers is that there is always a certain loss of image register because of the transport of the image by the intermediate belt. In other words, it is never entirely certain where the image will finally arrive on a receiving material. In addition, there is always some degree of image distortion, for example, deformation of a straight line to a somewhat curved line. Paragraph 5 of the present application recognizes that prior art solutions cannot solve these problems completely and also prior art solutions possess various disadvantages of their own.

In an effort to solve these prior art problems, the Applicants first discovered that the intermediate belt oscillates, that is, locally deviates in the axial direction, when it rotates. Please see in this regard paragraph 7, lines 4 and 5 of the present application. After this discovery, it was found that this oscillation is dependent on the tension to which the belt is subjected (see paragraph 7, lines 9 and 10 of the present application). It was then determined that this tension dependence is a consequence of the positioning of the threads of the supporting fabric in the belt and it was only after this recognition that a solution to the prior art problems could be achieved, that is, the positioning of the threads in the peripheral direction (longitudinal direction) such that the axial deviations of the belt are substantially tensioned independent.

The Kobayashi et al. reference, U.S. Patent 6,704,535B2, in contra distinction to the present invention, deals with a problem which is completely different from that of the present invention, that is, the problem called "core trace image," that is, the

fiber trace itself appears as a density irregularity in a printed image (please see in this regard column 2, lines 10-15 of the referenced patent). This problem is completely different from the "loss of image register" and "image distortion" problems solved by the present invention. The solution suggested by the Kobayashi et al. patent to overcome the "core trace image" is to position the threads at a certain distance from each other as discussed in column 2, lines 35-37 of the referenced patent. The solution is particularly illustrated in Figure 4 where it is shown that the distance L_n between the threads, when viewed in cross section, is the relevant parameter in order to solve the problem of core trace image. Thus, in column 2, lines 10-15 of the referenced patent, the patentee further describes the "core trace image" problem wherein the fiber trace can, in some cases, appear as a density irregularity in the product image. Thus, the patentees have found that the core trace image problems occurred in the case where the fibers constituting the core member embedded within the base layer of the intermediate transfer member are not disposed with a proper spacing between adjacent fibers. However, the present invention has nothing to do with lateral spacing between threads, but rather to the positioning of the threads of the fabric substantially parallel to the peripheral direction of the belt. This positioning is the relevant parameter for solving the "loss of image register" and "image-distortion" problems. Since the Kobayashi et al. patent remains silent about a positioning that provides such tension independency, there is no reason to even suspect that the fiber positions such as taught by Kobayashi are the same as presently claimed. Even further, Kobayashi does not mention peripheral positioning of the fibers during weaving of the belt nor discloses re-positioning of these fibers after weaving of the belt in order to obtain the presently claimed tension independency. In short, the Kobayashi et al. patent is concerned with a completely different problem and therefore provides for a totally different solution than that defined by the present invention. Thus, according to the present invention, the threads of the fabric are positioned in a particular way along the periphery such that when the belt rotates, a deviation of the belt axially is substantially independent of tension.

With respect to the method claims of the present application, claim 4 clearly recites the feature of re-positioning the threads of the belt after the belt has been weaved. The Kobayashi et al. patent indeed mentions weaving for making a fabric support (see column 3, line 67 for references made to a woven cloth). However, the referenced patent remains totally silent concerning the step of repositioning the threads after the weaving process. The reason for this is clear, in that the Kobayashi et al. patent clearly lacks the understanding that the longitudinal positioning of the threads is a major importance for avoiding belt tension – dependent oscillation of the intermediate belt. Since the Kobayashi et al. patent does not suggest the step of repositioning the threads of the belt after the belt is weaved, the referenced patent cannot possibly suggest the method of making an intermediate belt as defined by method claims 4–12 of the present application.

Accordingly, in view of the above amendments and remarks, reconsideration of the rejection and allowance of the claims of the present application are respectfully requested.

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Respectfully submitted,

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